Claims:

1. A method for improving the uniformity of a wet coating on a substrate comprising contacting the coating at a first position with wetted surface portions of at least two rotating wire-wound coating rods and re-contacting the coating with such wetted surface portions at a different position or positions on the substrate.

2. A method according to claim 1 wherein the coating rods do not have the same period of contact with the substrate.

3. A method according to claim 2 wherein the rotational periods of the coating rods are not periodically related.

4. A method according to claim 1 comprising at least three coating rods.

5. A method according to claim 4 wherein the coating rods all have different periods of rotation.

6. A method according to claim 4 wherein the coating rods have a progression of smaller and smaller wire diameters.

7. A method according to claim 1 comprising at least five coating rods.

8. A method according to claim 1 comprising at least ten coating rods.

9. A method according to claim 1 wherein the coating rods have the same period of contact with the substrate.

10. A method according to claim 9 comprising at least four coating rods.

11. A method according to claim 9 comprising at least ten coating rods.

12. A method according to claim 1 wherein the substrate has a direction of motion and the direction of rotation of at least one of the coating rods is the same as the direction of substrate motion.

13. A method according to claim 12 wherein the direction of rotation of at least two of the coating rods is the same as the direction of substrate motion.

14. A method according to claim 12 wherein all the coating rods rotate in the same direction as and at substantially the same speed as the substrate.

15. A method according to claim 12 wherein the substrate comprises a web and the coating rods are undriven, bear against the substrate and are rotated by the motion of the substrate.

16. A method according to claim 1 wherein the substrate comprises a sheet mounted on a rotating support.

17. A method according to claim 1 further comprising changing the period of rotation of a coating rod to reduce or minimize coating defects.

18. A method according to claim 1 further comprising operating a coating rod at a fixed or variable surface speed differential relative to the surface speed of the support.

19. A method according to claim 18 wherein the surface speed differential is varied sinusoidally.

20. A method according to claim 1 wherein the substrate initially has a discontinuous coating.

21. A method according to claim 20 wherein the coating comprises a pattern of stripes.

22. A method according to claim 21 further comprising selecting or changing the stripe width to produce a more uniform coating.

23. A method according to claim 20 wherein the coating comprises a pattern of drops.

24. A method according to claim 1 wherein the coating is converted from a voided coating to a void-free continuous coating.

25. A method according to claim 1 wherein the coating is converted to have an average caliper less than 5 micrometers.

26. A method according to claim 1 wherein the coating comprises one or more lanes of coating on the substrate.

27. A method according to claim 26 wherein the coating comprises two or more lanes containing the same or two or more differing formulations separated by a lane or lanes without coating.

28. A method according to claim 26 wherein the coating comprises two or more adjacent lanes containing two or more differing formulations.

29. A device comprising two or more rotating wire-wound coating rods that periodically contact and re-contact a wet coating at different positions on a substrate, wherein the periods of the devices are selected so that the uniformity of the coating is improved.

30. A device according to claim 29 wherein the coating rods do not have the same period of contact with the substrate.

31. A device according to claim 30 wherein the rotational periods of the coating rods are not periodically related.

32. A device according to claim 29 comprising at least three coating rods.

33. A device according to claim 32 wherein the coating rods all have different periods of rotation.

34. A device according to claim 32 wherein the coating rods have a progression of smaller and smaller wire diameters.

35. A device according to claim 29 comprising at least five coating rods.

36. A device according to claim 29 comprising at least ten coating rods.

37. A device according to claim 29 wherein the coating rods have the same period of contact with the substrate.

38. A device according to claim 37 comprising at least four coating rods.

39. A device according to claim 37 comprising at least ten coating rods.

40. A device according to claim 29 wherein the substrate has a direction of motion and the direction of rotation of at least one of the coating rods is the same as the direction of substrate motion.

41. A device according to claim 40 wherein the direction of rotation of at least two of the coating rods is the same as the direction of substrate motion.

42. A device according to claim 40 wherein all the coating rods rotate in the same direction as and at substantially the same speed as the substrate.

43. A device according to claim 40 wherein the substrate comprises a web and the coating rods are undriven, bear against the substrate and are rotated by the motion of the substrate.

44. A device according to claim 29 wherein the substrate comprises a sheet mounted on a rotating support.

45. A device according to claim 29 wherein the period of rotation of a coating rod can be changed to reduce or minimize coating defects.

46. A device according to claim 29 wherein a coating rod can be operated at a fixed or variable surface speed differential relative to the surface speed of the support.

47. A device according to claim 46 wherein the surface speed differential is varied sinusoidally.

48. A device according to claim 29 wherein the coating rods can contact and re-contact one or more lanes of coating on the substrate.

49. A device according to claim 48 wherein the coating rods can contact and re-contact two or more lanes containing the same or two or more differing formulations separated by a lane or lanes without coating.

50. A device according to claim 48 wherein the coating rods can contact and re-contact two or more adjacent lanes containing two or more differing formulations.

51. A coating apparatus comprising a coating station that applies an uneven coating to a substrate and an improvement station comprising a device according to claim 29.

52. A coating apparatus according to claim 51 wherein the coating station applies a discontinuous coating.

53. A coating apparatus according to claim 51 wherein the coating station applies a pattern of stripes.

54. A coating apparatus according to claim 51 wherein the stripe width can be selected or changed to produce a more uniform coating.

55. A coating apparatus according to claim 51 wherein the coating station applies a pattern of drops.

56. A coating apparatus according to claim 51 wherein the coating is converted from a voided coating to a void-free continuous coating.

57. A coating apparatus according to claim 51 wherein the coating is converted to have an average caliper less than 5 micrometers.

58. A coating apparatus comprising a coating station for applying an uneven coating to a first substrate, an improvement station comprising a device according to claim 29, and a transfer station for transferring the coating from the first substrate to a second substrate.